Math 151A: Applied Numerical Methods, Spring 2012

MWF 12:00pm, MS 6229

Welcome to the course!

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Course Summary:

Lecture: MWF 12:00pm, MS 6229
Discussion: T 12:00pm, MS 6229 (Gabe Merton)
Course Webpage: http://www.math.ucla.edu/~brune/151a
http://www.math.ucla.edu/classes/math/12s/151a.1.12s/
Section ID: 262-564-200
Textbook: R.L. Burden, J.D Faires – Numerical Analysis (9^{th} Edition)
Requisites: MATH 32B, 33B, 115A, PIC 10A
Course description: Introduction to **numerical methods** with emphasis on algorithms, analysis of algorithms, and computer implementation issues. Solution of nonlinear equations. Numerical differentiation, integration, and interpolation. Direct methods for solving linear systems. Matlab programming. Letter grading.
Course schedule: The lectures will cover **chapters 1,2,3,4 and 6** of the textbook. A detailed (tentative) schedule of the chapters covered in the sessions can be found on the webpage.

Exams:

- **Midterm Exam: April 30, 2012** in class.
  There will be no makeup exams, no exceptions.
- **Final Exam: June 14, 2012, 11:30am - 2:30pm**.
  You must take the final in order to pass the class, no exceptions. The exam code is 05.

Homework:

Homework is very important to understanding the material in the class. Homework will be officially assigned on the webpage each Friday, to be **due** at the **beginning of lecture** on the following **Friday**; in the case of a Friday holiday, homework is due Monday. This will give a total of about 9 homework assignments, of which I will **drop the lowest two** when calculating your grade. For this reason, no late homeworks will be accepted, for any reason. Homework must be stapled and labeled with your name and ID. Homework will be worth **25%** of the overall grade. Please feel free to work in groups on the homework, though everyone should have their own, unique written/printed pages to turn in.

Programming:
This being a course on Numerical Methods, some homework problems will require you to write a computer program. We will use **Matlab** as the programming language for this course. Since this is not a course on programming, and since each of you should have already completed at least PIC 10A, we will not really cover how to program in this course. However, the first discussion session on **Tue, April 3, 12pm** (MS 6629) will cover a short **Matlab introduction**.
Computers are available for you to use in the **PIC lab, Boelter Hall 2817**, and they are equipped with a variety of software packages and compilers to suit your needs.

Grading:

To give you an ample opportunity to succeed, your grade will be computed as a maximum of two grading schemes:

Grading scheme 1	25% Homework	30% Midterm	45% Final
Grading scheme 2	25% Homework		75% Final

The final letter grade you receive will be the result of a curved grade distribution, with approximately those in the top 66% receiving an A or B, and the rest a C, D, or (hopefully not) F. I will most likely not assign "+" or "-" grades. During the quarter, I will be using the MyUCLA grading program, so that your scores should be viewable by you whenever they have been entered online.